Missouri Department of Natural Resources
Air Pollution Control Program

PERMIT TO OPERATE

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to operate the air contaminant source(s) described below, in accordance with the laws, rules, and conditions set forth here in.

Operating Permit Number:
Expiration Date:
Installation ID: 510-0040
Project Number: 1997-05-029

Installation Name and Address
Washington University - School of Medicine
500 South Euclid
St. Louis, MO 63110
City of St. Louis

Parent Company's Name and Address
Same as Above

Installation Description:
Washington University – School of Medicine is a large medical school complex. Sources at this installation include heating boilers, emergency generators, fuel oil tanks, a pathological incinerator, and parts washers.

Effective Date

Director or Designee
Department of Natural Resources

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I. Installation Description and Equipment Listing

INSTALLATION DESCRIPTION

Washington University – School of Medicine is a large medical school complex. Sources at this installation include heating boilers, emergency generators, fuel oil tanks, a pathological incinerator, and parts washers. The reported actual emissions for the past five years for the installation are listed below:

Reported Air Pollutant Emissions, tons per year							
Year	Particulate Matter ≤ Ten Microns (PM-10)	Sulfur Oxides (SO_x)	Nitrogen Oxides (NO_x)	Volatile Organic Compounds (VOC)	Carbon Monoxide (CO)	Lead (Pb)	Hazardous Air Pollutants (HAPs)
1998	23.47	772.68	96.62	1.69	72.78	0.01	15.26
1999	24.06	808.00	106.40	1.61	77.20	0.01	14.95
2000	24.40	609.50	130.80	2.36	85.56	0.02	13.91
2001	137.50	443.40	62.69	0.73	45.91	0.00	10.10
2002	116.57	49.57	15.73	0.74	8.10	0.00	1.14

EMISSION UNITS WITH LIMITATIONS

The following list provides a description of the equipment at this installation which emit air pollutants and which are identified as having unit-specific emission limitations.

Emission Unit #	EIQ Reference #	Description of Emission Unit
EU0010	EP-01	Boiler #1, 93 MMBtu/hr
EU0020	EP-04	Boiler #4, 93 MMBtu/hr
EU0030	EP-05	Boiler #5, 124 MMBtu/hr
EU0040	EP-07	Pathological Incinerator
EU0050	EP-25	Boiler #7, 88 MMBtu/hr
EU0060	EP-26	Graymills Parts Washer (Machine Shop)
EU0070	EP-26	Graymills Parts Washer (Power Plant)
EU0080	EP-27	0.34 MMBtu/hr Natural Gas Emergency Generator (IWJEMG1)
EU0090	EP-27	0.11 MMBtu/hr Natural Gas Emergency Generator (SOUEMG1)
EU0100	EP-27	0.86 MMBtu/hr Natural Gas Emergency Generator (SOUEMG2)
EU0110	EP-27	2.10 MMBtu/hr Natural Gas Emergency Generator (WOCEMG1)
EU0120	EP-27	0.14 MMBtu/hr Gasoline Emergency Generator (MCDEMG2)
EU0130	EP-27	0.16 MMBtu/hr Gasoline Emergency Generator (JPBEMG1)
EU0140	EP-27	0.68 MMBtu/hr Diesel Emergency Generator (ROBEMG1)
EU0150	EP-27	0.34 MMBtu/hr Diesel Emergency Generator (SHREMG1)
EU0160	EP-27	0.93 MMBtu/hr Diesel Emergency Generator (PGCEMG1)
EU0170	EP-27	0.75 MMBtu/hr Diesel Emergency Generator (ECBEMG1)
EU0180	EP-27	3.47 MMBtu/hr Diesel Emergency Generator (BTCEMG)
EU0190	EP-27	1.30 MMBtu/hr Diesel Emergency Generator (MATEMG1)
EU0200	EP-27	2.89 MMBtu/hr Diesel Emergency Generator (MCMEMG1)
EU0210	EP-27	3.73 MMBtu/hr Diesel Emergency Generator (RENEMG1)
EU0220	EP-27	4.55 MMBtu/hr Diesel Emergency Generator (MDCEMG1)
EU0230	EP-27	2.89 MMBtu/hr Diesel Emergency Generator (WESEMG1)
EU0240	EP-27	4.97 MMBtu/hr Diesel Emergency Generator (CSREMG1)
EU0250	EP-27	4.97 MMBtu/hr Diesel Emergency Generator (CSREMG2)

Emission Unit #	EIQ Reference #	Description of Emission Unit
EU0260	EP-27	2.34 MMBtu/hr Diesel Emergency Generator (EIREMG1)
EU0270	EP-27	1.55 MMBtu/hr Diesel Emergency Generator (FPEEMG)
EU0280	EP-27	4.78 MMBtu/hr Diesel Emergency Generator (SIREMG)
EU0290	EP-27	7.59 MMBtu/hr Diesel Emergency Generator (EMDEMG1)
EU0300	EP-27	14.28 MMBtu/hr Diesel Emergency Generator (CSRNTAEMG)
EU0310	EP-27	8.09 MMBtu/hr Diesel Emergency Generator (BTCEMG)
EU0320	EP-28	Boiler #8, 85 MMBtu/hr

EMISSION UNITS WITHOUT LIMITATIONS

The following list provides a description of the equipment that does not have unit specific limitations at the time of permit issuance.

Description of Emission Source

Two 2.208 MMBtu/hr (each) Natural Gas Fired Boilers (EP-08)
Four 0.075 MMBtu/hr (each) Natural Gas Fired Water Heaters (EP-08)
1.2 MMBtu/hr Natural Gas Fired Boiler (EP-08)
2.75 MMBtu/hr Natural Gas Fired Boiler (EP-08)
1.6 MMBtu/hr Natural Gas Fired Boiler (EP-08)
Two 1.25 MMBtu/hr (each) Natural Gas Fired Forced Air Furnaces (EP-08)
0.75 MMBtu/hr Natural Gas Fired Boiler (EP-08)
Two 1.00 MMBtu/hr (each) Natural Gas Fired Boilers (EP-08)
Eight 0.2 MMBtu/hr (each) Natural Gas Fired Space Heaters (EP-08)
0.5 MMBtu/hr Natural Gas Fired Space Heater (EP-08)
0.24 MMBtu/hr Natural Gas Fired Water Heater (EP-08)
1.26 MMBtu/hr Natural Gas Fired Boiler (EP-08)
Two 2.205 MMBtu/hr Natural Gas Fired Boilers (EP-08)
Two 0.5 MMBtu/hr Natural Gas Fired Water Heaters (EP-08)
Two 0.125 MMBtu/hr Natural Gas Fired Forced Air Furnaces (EP-08)
0.032 MMBtu/hr Natural Gas Fired Water Heater (EP-08)
0.11 MMBtu/hr Natural Gas Fired Draft Induced Furnace (EP-08)
Two 0.125 MMBtu/hr Natural Gas Fired Unit Heaters (EP-08)
Two 0.12 MMBtu/hr Natural Gas Fired Rooftop Furnace Units (EP-08)
0.242 MMBtu/hr Natural Gas Fired Rooftop Furnace Unit (EP-08)
500 gallon Diesel Storage Tank (BTCAST) (EP 27)
3000 gallon Diesel Storage Tank (CSRNTAAST) (EP 27)
175 gallon Diesel Storage Tank (MATAST) (EP 27)
275 gallon Diesel Storage Tank (MCMAST) (EP 27)
320 gallon Diesel Storage Tank (RENAST) (EP 27)
500 gallon Diesel Storage Tank (MCDAST) (EP 27)
275 gallon Diesel Storage Tank (WESAST) (EP 27)
2000 gallon Diesel Storage Tank (CSRB1UST) (EP 27)
2000 gallon Diesel Storage Tank (CSRB2UST) (EP 27)
500 gallon Diesel Storage Tank (EPPAST) (EP 27)
400 gallon Diesel Storage Tank (EIRAST) (EP 27)
175 gallon Diesel Storage Tank (FPEAST) (EP 27)
500 gallon Diesel Storage Tank (SIRAST) (EP 27)

2000 gallon Diesel Storage Tank (EMDAST) (EP 27)
100 gallon Diesel Storage Tank (ECBAST) (EP 27)
200 gallon Diesel Storage Tank (SHREAST) (EP 27)
500 gallon Diesel Storage Tank (ROBAST) (EP 27)
100 gallon Diesel Storage Tank (PCGAST) (EP 27)
660 gallon Diesel Storage Tank (BTCAST) (EP 27)
Acid Neutralization Tank with Laboratory Hood
Carpentry Shop (Library Annex) – Spray Glue Activities
Laboratory Hoods – Medical and Research (approximately 1000)
Welding
24 Cooling Towers throughout the installation

DOCUMENTS INCORPORATED BY REFERENCE
These documents have been incorporated by reference into this permit.

1) St. Louis City Construction Permit No. 95-05-056PM
2) St. Louis City Construction Permit No. 96-10-083F
3) St. Louis City Construction Permit No. 98-10-060
4) St. Louis City Construction Permit No. 01-05-013
5) St. Louis City Construction Permit No. 01-05-014
6) Eight St. Louis City Source Registrations dated September 25, 1998
7) St. Louis City Source Registration for Cold Cleaners dated October 22, 2001

II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements.

Permit Condition PW001

10 CSR 10-6.170
Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin

Emission Limitation:

1) The permittee shall not cause or allow to occur any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line or origin. The nature or origin of the particulate matter shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director.
2) The permittee shall not cause nor allow to occur any fugitive particulate matter emissions to remain visible in the ambient air beyond the property line of origin.
3) Should it be determined that noncompliance has occurred, the director may require reasonable control measures as may be necessary.

Monitoring:

1) The permittee shall conduct inspections of its facilities sufficient to determine compliance with this regulation. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. If a violation of this regulation is discovered, the source shall undertake corrective action to eliminate the violation.
2) The following monitoring schedule must be maintained:
   a) Observations must be made once per month. If a violation is noted, monitoring reverts to –
   b) Weekly observations shall be conducted for a minimum of eight (8) consecutive weeks. Should no violation of this regulation be observed during this period then-
   c) Observations must be made once every two weeks for a period of eight (8) weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then observations revert to monthly..

Record Keeping:

1) A log must be maintained noting the following:
   a) Whether air emissions (except water vapor) remain visible in the ambient air beyond the property line of origin.
   b) Whether the visible emissions were normal for the installation.
   c) Equipment malfunctions that could cause an exceedance of 10 CSR 10-6.170.
   d) Any violations of 10 CSR 10-6.170 and any corrective actions undertaken to correct the violation.
2) Attachment A contains a log including these record keeping requirements. This log, or an equivalent created by the permittee, must be used to certify compliance with this requirement.

Reporting:

The permittee shall submit semiannual reports that contain any deviations from or exceedances of the terms imposed by this regulation, or any malfunction which causes a deviation from or exceedance of this regulation.

Permit Condition PW002

St. Louis City Ordinance 65645, § 14[1]
Restrictions of Visible Air Emissions
10 CSR 10-6.220
Restriction of Emission of Visible Air Contaminants

Emission Limitation:
No person shall discharge into the atmosphere from any source of emission any air contaminant greater than 20% visible opacity for a period in excess of six (6) minutes in any consecutive sixty (60) minute period.
Any emissions in excess of 40% opacity, regardless of time, are considered excessive emissions.

Monitoring:
1) The permittee shall conduct opacity readings on the emission units using USEPA Test Method 22 like procedures. Readings are only required when the emission unit(s) is operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.
2) The following monitoring schedule must be maintained:
   a) Observations must be made once per month. If a violation is noted, monitoring reverts to –
   b) Weekly observations shall be conducted for a minimum of eight (8) consecutive weeks. Should no violation of this regulation be observed during this period then-
   c) Observations must be made once every two weeks for a period of eight (8) weeks. If a violation is noted, monitoring reverts to weekly. Should no violation of this regulation be observed during this period then observations revert to monthly.

Record Keeping:
1) The permittee shall maintain records of all observation results (See Attachment B-1 & B-2), noting:
   a) Whether any air emissions (except for water vapor) were visible from the emission units,
   b) All emission units from which visible emissions occurred, and
   c) Whether the visible emissions were normal for the process.
2) The permittee shall maintain records of any equipment malfunctions.
3) The permittee shall maintain records of any Method 9 test performed in accordance with this permit condition. (see Attachment B-2)

Reporting:
1) The permittee shall report to the City of St. Louis Air Pollution Control Program, 1415 North Thirteenth Street, St. Louis, MO 63106 and the Air Pollution Control Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit(s) exceeded the opacity limit.
2) Reports of any deviations from monitoring, record keeping and reporting requirements of this permit condition shall be submitted semiannually.

[1] St. Louis City Ordinance 65645, §14 is a local agency rule which is enforceable by the City of St. Louis only.

III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements.

EU0010 through EU0030 Boiler #1, Boiler #4 and Boiler #5			
EU ID	EIQ Reference # (Year)	General Description	Manufacturer/ Model #
EU0010	EP-01 (2002)	Boiler #1 – 93 MMBtu/hr (Installed 1979) Fuel: Natural Gas/Fuel Oil	Keeler
EU0020	EP-04 (2002)	Boiler #4 – 93 MMBtu/hr (Installed 1969) Fuel: Natural Gas/Fuel Oil	Keeler
EU0030	EP-05 (2002)	Boiler #5 – 124 MMBtu/hr (Installed 1964) Fuel: Natural Gas/Fuel Oil	Union Iron Works

Permit Condition EU0010-001 through EU0030-001

10 CSR 10-5.030
Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating

Emission Limitation:
The permittee shall not emit particulate matter (PM) in excess of the following amounts:
Boiler #1 -- 0.12 pounds of PM per million Btu of heat input
Boiler #4 -- 0.22 pounds of PM per million Btu of heat input
Boiler #5 -- 0.22 pounds of PM per million Btu of heat input

Operational Limitation:
The emission units shall be limited to burning fuel oil, with a sulfur content of 0.5% by weight sulfur, and pipeline grade natural gas.

Monitoring/Record Keeping:
The permittee shall maintain records of the fuel type used verifying a sulfur content less than 0.5% by weight. Purchase receipts, analyzed samples or certifications that verify the fuel type as a grade level with a sulfur content less than 0.5% by weight will be acceptable.

Reporting:
The permittee shall submit fuel certification, and deviation or exceedance reports to the City of St. Louis Air Pollution Control Program, 1415 North Thirteenth Street, St. Louis, MO 63106 and to APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 semiannually.

Permit Condition EU0010-002 through EU0030-002

10 CSR 10-6.260
Restriction of Emission of Sulfur Compounds

Emission Limitation:

1) No person shall cause or permit the emission of sulfur compounds from any source which causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality Standards. [10 CSR 10-6.260(4) &10 CSR 10-6.010 Ambient Air Quality Standards] [2]

Pollutant	Concentration by Volume	Remarks
a) Sulfur Dioxide (SO_2)	0.03 parts per million (ppm)	Annual arithmetic mean
	0.14 ppm (365 micrograms per cubic meter ($\mu g/m^3$))	24-hour average not to be exceeded more than once per year
	0.5 ppm (1300 $\mu g/m^3$)	3-hour average not to be exceeded more than once per year
b) Hydrogen Sulfide (H_2S)	0.05 ppm (70 $\mu g/m^3$)	½-hour average not to be exceeded over 2 times per year
	0.03 ppm (42 $\mu g/m^3$)	½-hour average not to be exceeded over 2 times in any 5 consecutive days
c) Sulfuric Acid (H_2SO_4)	10 $\mu g/m^3$	24-hour average not to be exceeded more than once in any 90 consecutive days
	30 $\mu g/m^3$	1-hour average not to be exceeded more than once in any 2 consecutive days

2) The emission units shall be limited to burning Fuel Oil No. 2 (0.5% sulfur) and pipeline grade natural gas.
Note: The fuel oils known to be less than 0.5% by weight sulfur per Chapter 414 RSMo, section 414.032, ASTM D396 – Table 1 and ASTM D975 - Table 1, are Fuel Oil No. 1 and No. 2 and diesel Fuel Oil Grade Low Sulfur No. 1-D, Grade Low Sulfur No. 2-D.

Monitoring/Record Keeping:

The permittee shall maintain an accurate record of the sulfur content of fuel used. Fuel purchase receipts analyzed samples or certifications that verify the fuel type and sulfur content will be acceptable.

Reporting:

The permittee shall submit fuel certification, and deviation or exceedance reports to the City of St. Louis Air Pollution Control Program, 1415 North Thirteenth Street, St. Louis, MO 63106 and to APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 semiannually.

[2] 10 CSR 10-6.260(4) is a state-only requirement

EU0040 Pathological Incinerator (Crematory)	
General Description:	1.65 MMBtu/hr Natural Gas Fired Pathological Incinerator located at 4566 Scott, Installed in 1989
Manufacturer/Model #:	B&L
EIQ Reference # (2002):	EP#7

Permit Condition EU0040-001

10 CSR 10-6.060
Construction Permits Required
St. Louis City Construction Permit No. 96-10-083F

Emission Limitation:

1) This incinerator shall only be charged with human remains. This limitation excludes the incineration of fiberglass or chlorine-containing plastic. Plastic that does not contain chlorine may be incinerated.
2) The incinerator operation shall be limited to twelve (12) hours a day, five (5) days/week and fifty-two (52) weeks/year.
3) Incinerator shall be equipped with an operable charging lock-out mechanism which prohibits charging during the manufacturer's burn cycle.
4) Incinerator shall have a plate affixed to the incinerator inscribed with the essential steps necessary for satisfactory operation of the incinerator. It shall state the Burn Capacity (BC) in pounds of waste burned per hour or per batch.
5) A trained operator shall be on duty and immediately available during all periods of incinerator operation. The manufacturer's operating instructions and guidelines shall be available on-site at all times.
6) Human remains charges shall not exceed three hundred twelve (312) tons per year.
7) Human charges shall not exceed a limit of two hundred (200) pounds per hour.
8) The particulate emission shall not exceed more than 0.03 grains per dry standard cubic foot of exhaust gas corrected to seven (7%) percent oxygen.
9) The system shall be operated in such a manner that the emission from the stack will not exceed ten (10%) percent opacity for a period in excess of six (6) minutes in any consecutive sixty (60) minute period.
10) The secondary combustion chamber gases shall be pre-heated to and maintained at or above one thousand four hundred (1400 ^{O}F) degrees Fahrenheit prior to charging and throughout the incineration process.
11) Residence time of the gases within the secondary chamber shall be at least one (1) second.

Monitoring:

1) The temperature in the secondary combustion chamber shall be determined and recorded a minimum of one (1) second downstream from the entrance of the secondary chamber using a continuous chart recorder.
2) The permittee shall follow the opacity monitoring and record keeping requirements as stated in the Permit Condition PW002.

Record Keeping:

1) Continuous record of the secondary combustion chamber temperatures.
2) Record of the quantity and type of charge incinerated. In addition, if the material incinerated did not originate within the Medical Center Complex, a record of any containers, bodies or body parts incinerated shall be kept (see Attachment F).
3) Record of all maintenance performed (see Attachment E).
4) Record of any performance or other emission test performed on this unit or similar unit.
5) Record of incineration operational hours (see Attachment F).
6) Record or written certification of the appropriate training received by the operator, with the dates of training that includes a listing of the instructor's qualifications or applicable certification school, shall be available for viewing at the Medical Center Complex during normal working hours.

Reporting:
The permittee shall report to the City of St. Louis Air Pollution Control Program, 1415 North Thirteenth Street, St. Louis, MO 63106 and to APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 no later than ten days after any deviation from or exceedance of any of the terms imposed by this permit condition.

EU0050 Boiler #7	
General Description:	Natural Gas/Fuel Oil Fired 88 MMBtu/hr Boiler, Installed in 1995
Manufacturer/Model #:	Cleaver Brooks/DL-76E
EIQ Reference # (Year):	EP-25 (2002)

Permit Condition EU0050-001

10 CSR 10-6.070
New Source Performance Regulations
40 CFR Part 60 Subpart Dc
Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Emission Limitation:
1) Standard for sulfur dioxide:
   a) On and after the date on which the initial performance test is completed or required to be completed under §60.8 of 40 CFR Part 60, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO2 in excess of 215 ng/J (0.50 lb/million Btu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. [§60.42c(d)]
   b) For distillate oil-fired boilers, compliance with the emission limits or fuel oil sulfur limits may be determined based on a certification from the fuel supplier, as described under §60.48c(f)(1). [§60.42c(h) & (h)(1)]
   c) The SO2 emission limits and fuel oil sulfur limits apply at all times, including periods of startup, shutdown, and malfunction. [§60.42c(i)]
2) Standard for particulate matter:
   a) On and after the date on which the initial performance test is completed or required to be completed under §60.8 of 40 CFR Part 60, whichever date comes first, no owner or operator of an affected facility that combusts oil and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. [§60.43c(c)]
   b) The opacity standards apply at all times, except during periods of startup, shutdown, or malfunction. [§60.43c(d)]

Monitoring:
1) Sulfur dioxide:
   The permittee shall monitor the sulfur dioxide emissions by maintaining the fuel supplier certification of the oil combusted.
2) Particulate matter (Opacity):
   The permittee shall follow the opacity monitoring and record keeping requirements as stated in the Permit Condition PW002.

Record Keeping:
1) For distillate oil: Records of fuel supplier certification.
   The Fuel Supplier Certification shall include the name of the oil supplier; and a statement from the oil supplier that the oil complies with the specifications for distillate oil (Distillate oil means fuel oil that complies with the specifications for fuel oil number 1 or 2, as defined by the American society for Testing and Materials in ASTM D396-78, 89, 90, 92, 96, or 98 "Standard Specification of Fuel Oils"). [§60.48c(f)(1) & §60.41c – Definition]
2) The permittee shall record and maintain records of the amounts of each fuel combusted during each day. [§60.48c(g)]

3) The permittee shall maintain all records required under §60.48c for a period of two (2) years following the date of such record. [§60.48c(i)]

Reporting:

The permittee shall submit records of fuel supplier certification with a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certification submitted represent all of the fuel combusted during the reporting period. The reporting period for the reports required is each six-month period. All reports including calendar dates covered in the reporting period shall be submitted to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 and to the City of St. Louis Air Pollution Control Division, 1415 North Thirteenth Street, St. Louis, MO 63106 by the 30th day following the end of the reporting period.
[§60.48c(d), (e)(1), (e)(11) & (j)]

Permit Condition EU0050-002

10 CSR 10-6.060
Construction Permits Required
St. Louis City Construction Permit No. 95-05-056PM

Emission Limitation:

1) Natural gas throughput shall be limited to 770 million cubic feet in any consecutive twelve-month period and 88,000 cubic feet per hour.
2) Fuel Oil No. 2 throughput shall be limited to 2,080,000 gallons in any consecutive twelve-month period.
3) The permittee shall only burn pipeline grade natural gas or Fuel Oil No. 2.
4) The boiler shall be equipped with a low NO_x burner, which is designed to reduce NO_x emission levels to a maximum of 0.10 lbs/MMBtu for natural gas firing and 0.27 lbs/MMBtu for Fuel Oil No. 2.

Monitoring/Record Keeping:

1) A monthly natural gas throughput total shall be calculated and recorded by the 10th day of the following month. A consecutive twelve-month total shall also be calculated at this time. (See Attachment C)
2) A monthly Fuel Oil No. 2 throughput total shall be calculated and recorded by the 10th day of the following month. A consecutive twelve month total shall also be calculated at this time. (See Attachment C)
3) All records shall be kept for a minimum of 60 months and shall be made available to this Program upon request.

Reporting:

1) The permittee shall report to the City of St. Louis Air Pollution Control Program, 1415 North Thirteenth Street, St. Louis, MO 63106 and to APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 no later than ten days after the end of each month, if the records show that permittee exceeded the 12-month or hourly fuel throughput limitation.
2) Semiannually the permittee shall submit records of fuel supplier certification with a certified statement that the records of fuel supplier certification submitted represent all of the fuel combusted during the reporting period.

EU0060 through EU0070 Two (2) Parts Washers			
EU ID	EIQ Reference # (Year)	General Description	Manufacturer/ Model #
EU0060	EP-26 (2002)	20 Gallon Parts Washer Located in the Machine Shop	Graymills
EU0070	EP-26 (2002)	15 Gallon Parts Washer Located in the Power Plant	Graymills

Permit Condition EU0060-001 through EU0070-001

10 CSR 10-5.300
Control of Emissions From Solvent Metal Cleaning

Emission Limitation:

1) After April 1, 2001, no owner or operator shall operate a cold cleaner using a solvent with a vapor pressure greater than 1.0 mmHg at 20°C (68°F).
   Exception: a) The permittee may use an alternative method for reducing cold cleaning emissions if the level of emission control is equivalent to or greater than the requirements listed above. The director must approve the alternative method. b) This limitation shall not apply when using an aqueous solvent.
2) Each cold cleaner shall have the following:
   a) A cover which will prevent the escape of solvent vapors from the solvent bath while in the closed position, or
   b) An enclosed reservoir which limits the escape of solvent vapors from the solvent bath whenever parts are not being processed in the cleaner. Cold cleaner covers shall be closed whenever parts are not being handled in the cleaners or the solvent must drain into the enclosed reservoir.
   c) When one (1) or more of the following conditions exist, the design of the cover shall be such that it can be easily operated with one (1) hand and without disturbing the solvent vapors in the tank. For covers larger than ten (10) square feet, this shall be accomplished by either mechanical assistance such as spring loading or counter weighing or by power systems:
      i) The solvent volatility is greater than 0.3 pounds per square inch (psi) measured at one hundred degrees Fahrenheit (100oF) such as in mineral sprits;
      ii) The solvent is agitated; or
      iii) The solvent is heated.
   d) Drainage facility which will be internal so that the parts are enclosed under the cover while draining.
   e) If the internal drainage facility cannot fit into the cleaning system and the solvent volatility is less than 0.6 psi measured at one hundred degrees Fahrenheit (100°F), then the cold cleaner shall have an external drainage facility which provides for the solvent to drain back into the solvent bath.
   f) Solvent sprays, if used, shall be a solid fluid stream (not fine, atomized, of shower type spray) and at a pressure which does not cause splashing above or beyond the freeboard.
   g) A permanent conspicuous label summarizing the operating procedures shall be affixed to the equipment.
   h) If the solvent volatility is greater than 0.6 psi measured at one hundred degrees Fahrenheit (100oF) or is heated above one hundred twenty degrees Fahrenheit (120°F), then one of the following control devices must be used:
      i) Freeboard ratio of at least .75
      ii) Water cover over solvent
      iii) Demonstrate an overall VOC emission reduction efficiency greater than or equal to sixty-five percent (65%) through a control system approved by the director.
3) Each cold cleaner shall be operated as follows:
   a) Cold cleaner covers shall be closed whenever parts are not being handled in the cleaners or the solvent must drain into an enclosed reservoir.
   b) Clean parts shall be drained in the freeboard area for at least fifteen (15) seconds or until dripping ceases, whichever is longer.

c) Whenever a cold cleaner fails to perform within the operating parameters established for it by this regulation, the unit shall be shut down immediately and shall remain shut down until trained service personnel are able to restore operation within the established operating procedures.
d) Solvent leaks shall be repaired immediately or the cleaner shall be shut down and leaks secured until the leaks are repaired.
e) Any waste material removed from a cold cleaner shall be disposed of by one (1) of the following methods in accordance with the Missouri Hazardous Waste Management Commission Rules codified as 10 CSR 25, as applicable:
   i) Reduction of the waste material to less than twenty percent (20%) VOC solvent by distillation and proper disposal of the still bottom waste, or
   ii) Stored in closed containers for transfer to a contract reclamation service or disposal facility approved by the director.
f) Waste solvent shall be stored in covered containers only.

4) Operators must be trained as follows:
   a) Only persons trained in at least the operation and equipment requirements specified in this rule for their particular solvent metal cleaning process to operate this equipment;
   b) The supervisor of any person who operates a solvent metal cleaning process shall receive equivalent or greater operational training than the operators; and
   c) Refresher training shall be given to all solvent metal cleaning equipment operators at least once every twelve-(12) month period.

Monitoring:

The permittee shall monitor the throughputs of the solvents monthly and maintain material safety data sheets of the cleanup solvents used at the installation.

Record keeping:

1) The permittee shall maintain the following records for each purchase of cold cleaner solvent (Attachment D-2):
   a) Name and address of the solvent supplier.
   b) Date of purchase.
   c) Type of solvent purchased.
   d) Vapor pressure of solvent in mm Hg at 20^{O}C or 68^{O}F.
2) The permittee shall keep monthly inventory records of solvent types and amounts purchased and solvent consumed. The records shall included all types and amounts of solvent containing waste material transferred to either a contract reclamation service or to a disposal installation and all amounts distilled on the premises (see Attachment D-1). The record also shall include maintenance and repair logs that occurred on the cold cleaner (Attachments E).
3) The permittee shall keep training records of solvent metal cleaning for each employee on an annual basis (Attachment D-3).

Reporting:

The permittee shall report submit deviation or exceedance reports to the City of St. Louis Air Pollution Control Program, 1415 North Thirteenth Street, St. Louis, MO 63106 and to APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 semiannually.

EU0080 through EU0110 Four Natural Gas Emergency Generators		
EU ID	EIQ Reference # (Year)	General Description
EU0080	EP-27 (2002)	0.34 MMBtu/hr Generator (Unit ID - IWJEMG1)
EU0090	EP-27 (2002)	0.11 MMBtu/hr Generator (Unit ID - SOUEMG1)
EU0100	EP-27 (2002)	0.86 MMBtu/hr Generator (Unit ID - SOUEMG2)
EU0110	EP-27 (2002)	2.10 MMBtu/hr Generator (Unit ID - WOCEMG1)

Permit Condition EU0080-001 through EU0110-001

10 CSR 10-6.060
Construction Permits Required
St Louis City Source Registration dated September 25, 1998

Emission Limitation:

1) EU0080 through EU0100: Operation of the emergency generators EU0080 through EU0100 shall not exceed 240 hours per generator in any consecutive twelve month period.

2) EU0110: Operation of the emergency generator EU0110 shall not exceed 300 hours in any consecutive twelve month period.

Monitoring/Record Keeping:

The permittee shall keep monthly records of each generator's operating time, in hours, including a calculated total for every twelve-month period of time. (See Attachment G)

Reporting:

1) The permittee shall report to the City of St. Louis Air Pollution Control Program, 1415 North Thirteenth Street, St. Louis, MO 63106 and to APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 no later than ten days after the end of each month, if the 12-month cumulative total records show that the permittee exceeded the hours of operation limitation for each generator.

Permit Condition EU0080-002 through EU0110-002

10 CSR 10-6.260
Restriction of Emission of Sulfur Compounds

Emission Limitation:

1) Emissions from this source operation shall not contain more than five hundred parts per million by volume (500 ppmv) of sulfur dioxide or more than thirty-five milligrams per cubic meter (35 mg/m3) of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour time period.
2) No person shall cause or permit the emission of sulfur compounds from any source which causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality Standards.
[10 CSR 10-6.260(4) &10 CSR 10-6.010 Ambient Air Quality Standards] [3]

Pollutant	Concentration by Volume	Remarks
a) Sulfur Dioxide (SO_2)	0.03 parts per million (ppm)	Annual arithmetic mean
	0.14 ppm (365 micrograms per cubic meter ($\mu g/m^3$))	24-hour average not to be exceeded more than once per year
	0.5 ppm (1300 $\mu g/m^3$)	3-hour average not to be exceeded more than once per year
b) Hydrogen Sulfide (H_2S)	0.05 ppm (70 $\mu g/m^3$)	½-hour average not to be exceeded over 2 times per year
	0.03 ppm (42 $\mu g/m^3$)	½-hour average not to be exceeded over 2 times in any 5 consecutive days
c) Sulfuric Acid (H_2SO_4)	10 $\mu g/m^3$	24-hour average not to be exceeded more than once in any 90 consecutive days
	30 $\mu g/m^3$	1-hour average not to be exceeded more than once in any 2 consecutive days

3) The emission units shall be limited to burning pipeline grade natural gas.

Monitoring/Record Keeping:

Documentation supporting the fuel used is natural gas. Fuel purchase receipts analyzed samples or certifications that verify the fuel type will be acceptable.

Reporting:

Semiannually the permittee shall submit a certified statement that only natural gas was fired in the generators.

[3] 10 CSR 10-6.260(4) is a state-only requirement

EU0120 through EU0130 Two Gasoline Emergency Generators		
EU ID	EIQ Reference # (Year)	General Description
EU0120	EP-27 (2002)	0.14 MMBtu/hr Generator (Unit ID – MCDEMG2)
EU0130	EP-27 (2002)	0.16 MMBtu/hr Generator (Unit ID – JPMEMG1)

Permit Condition EU0120-001 through EU0130-001

10 CSR 10-6.060
Construction Permits Required
St Louis City Construction Permit No. 98-10-060

Emission Limitation:

1) The emergency generators shall not be operated for more than 240 hours per generator during any consecutive twelve-month period of time.
2) The emergency generators shall be operated during periods of testing and maintenance.
3) The emergency generators shall be operated during periods when electrical service to the facility is interrupted.

Monitoring/Record Keeping:

Records of the hours of operation shall be kept monthly, including a calculated total for every twelve-month period of time. (See Attachment G)

Reporting:

1) The permittee shall report to the City of St. Louis Air Pollution Control Program, 1415 North Thirteenth Street, St. Louis, MO 63106 and to APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 no later than ten days after the end of each month, if the 12-month cumulative total records show that the permittee exceeded the hours of operation limitation for each generator.

Permit Condition EU0120-002 through EU0130-002

10 CSR 10-6.260
Restriction of Emission of Sulfur Compounds

Emission Limitation:

1) Emissions from this source operation shall not contain more than five hundred parts per million by volume (500 ppmv) of sulfur dioxide or more than thirty-five milligrams per cubic meter (35 mg/m3) of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour time period.
2) No person shall cause or permit the emission of sulfur compounds from any source which causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality Standards.
[10 CSR 10-6.260(4) &10 CSR 10-6.010 Ambient Air Quality Standards] [4]

Pollutant	Concentration by Volume	Remarks
a) Sulfur Dioxide (SO_2)	0.03 parts per million (ppm)	Annual arithmetic mean
	0.14 ppm (365 micrograms per cubic meter ($\mu g/m^3$))	24-hour average not to be exceeded more than once per year
	0.5 ppm (1300 $\mu g/m^3$)	3-hour average not to be exceeded more than once per year
b) Hydrogen Sulfide (H_2S)	0.05 ppm (70 $\mu g/m^3$)	½-hour average not to be exceeded over 2 times per year
	0.03 ppm (42 $\mu g/m^3$)	½-hour average not to be exceeded over 2 times in any 5 consecutive days
c) Sulfuric Acid (H_2SO_4)	10 $\mu g/m^3$	24-hour average not to be exceeded more than once in any 90 consecutive days
	30 $\mu g/m^3$	1-hour average not to be exceeded more than once in any 2 consecutive days

3) The emission units shall be limited to burning gasoline.

Monitoring/Record Keeping

Documentation supporting the fuel used is gasoline. Fuel purchase receipts analyzed samples or certifications that verify the fuel type will be acceptable.

Reporting:

Semiannually the permittee shall submit a certified statement that only gasoline was fired in the generators.

[4] 10 CSR 10-6.260(4) is a state-only requirement

EU0140 through EU0300 Diesel Emergency Generators		
EU ID	EIQ Reference # (Year)	General Description
EU0140	EP-27 (2002)	0.68 MMBtu/hr Generator (Unit ID – ROBEMG1)
EU0150	EP-27 (2002)	0.34 MMBtu/hr Generator (Unit ID – SHREMG1)
EU0160	EP-27 (2002)	0.93 MMBtu/hr Generator (Unit ID – PGCEMG1)
EU0170	EP-27 (2002)	0.75 MMBtu/hr Generator (Unit ID – ECBEMG1)
EU0180	EP-27 (2002)	3.47 MMBtu/hr Generator (Unit ID – BRCEMG)
EU0190	EP-27 (2002)	1.30 MMBtu/hr Generator (Unit ID – MATEMG1)
EU0200	EP-27 (2002)	2.89 MMBtu/hr Generator (Unit ID – MCMEMG1)
EU0210	EP-27 (2002)	3.37 MMBtu/hr Generator (Unit ID – RENEMG1)
EU0220	EP-27 (2002)	4.55 MMBtu/hr Generator (Unit ID – MDCEMG1)
EU0230	EP-27 (2002)	2.89 MMBtu/hr Generator (Unit ID – WESEMG1)
EU0240	EP-27 (2002)	4.97 MMBtu/hr Generator (Unit ID – CSREMG1)
EU0250	EP-27 (2002)	4.97 MMBtu/hr Generator (Unit ID – CSREMG2)
EU0260	EP-27 (2002)	2.34 MMBtu/hr Generator (Unit ID – EIREMG1)
EU0270	EP-27 (2002)	1.55 MMBtu/hr Generator (Unit ID – FPEEMG)
EU0280	EP-27 (2002)	4.78 MMBtu/hr Generator (Unit ID – SJREMG)
EU0290	EP-27 (2002)	7.59 MMBtu/hr Generator (Unit ID – EMDEMG1)
EU0300	EP-27 (2002)	14.28 MMBtu/hr Generator (Unit ID – CSRNTAEMG)

Permit Condition EU0140-001 through EU0300-001

10 CSR 10-6.060
Construction Permits Required
St Louis City Construction Permit No. 98-10-060
St. Louis City Source Registration dated September 25, 1998

Emission Limitation:

1) EU0140 through EU0280: Operation of the emergency generators EU0140 through EU0280 shall not exceed 240 hours per generator in any consecutive twelve month period.
2) EU0290 and EU0300: Operation of the emergency generators EU0290 and EU0300 shall not exceed 300 hours per generator in any consecutive twelve month period.
3) The emergency generators shall be operated during periods of testing and maintenance.
4) The emergency generators shall be operated during periods when electrical service to the installation is interrupted.
5) The emergency generators shall be operated with Fuel Oil No. 2 only.
6) The permittee shall not switch to a fuel oil with a sulfur content higher than 0.5% by weight without the permission from the St. Louis City Air Pollution Control Program.

Monitoring/Record Keeping:

1) Records of the hours of operation, for each generator, shall be kept monthly, including a calculated total for every consecutive twelve-month period of time. (See Attachment G)
2) The permittee shall maintain fuel purchase receipts or certifications that verify the fuel type and sulfur content.

Reporting:

1) The permittee shall report to the City of St. Louis Air Pollution Control Program, 1415 North Thirteenth Street, St. Louis, MO 63106 and to APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 no later than ten days after the end of each month, if the 12-month cumulative total records show that the permittee exceeded the hours of operation limitation for each generator.
2) Semiannually the permittee shall submit records of fuel supplier certification with a certified statement that the records of fuel supplier certification submitted represent all of the fuel combusted during the reporting period.

Permit Condition EU0140-002 through EU0300-002

10 CSR 10-6.260
Restriction of Emission of Sulfur Compounds

1) Emissions from this source operation shall not contain more than five hundred parts per million by volume (500 ppmv) of sulfur dioxide or more than thirty-five milligrams per cubic meter (35 mg/m3) of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour time period.
2) No person shall cause or permit the emission of sulfur compounds from any source which causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality Standards.
[10 CSR 10-6.260(4) &10 CSR 10-6.010 Ambient Air Quality Standards] [5]

Pollutant	Concentration by Volume	Remarks
a) Sulfur Dioxide (SO_2)	0.03 parts per million (ppm)	Annual arithmetic mean
	0.14 ppm (365 micrograms per cubic meter ($\mu g/m^3$))	24-hour average not to be exceeded more than once per year
	0.5 ppm (1300 $\mu g/m^3$)	3-hour average not to be exceeded more than once per year
b) Hydrogen Sulfide (H_2S)	0.05 ppm (70 $\mu g/m^3$)	½-hour average not to be exceeded over 2 times per year
	0.03 ppm (42 $\mu g/m^3$)	½-hour average not to be exceeded over 2 times in any 5 consecutive days
c) Sulfuric Acid (H_2SO_4)	10 $\mu g/m^3$	24-hour average not to be exceeded more than once in any 90 consecutive days
	30 $\mu g/m^3$	1-hour average not to be exceeded more than once in any 2 consecutive days

3) The emission units shall be operated with Fuel Oil No. 2 only.

Monitoring/Record Keeping:
The permittee shall maintain an accurate record of the sulfur content of fuel used. Fuel purchase receipts analyzed samples or certifications that verify the fuel type and sulfur content will be acceptable.

Reporting:
Semiannually the permittee shall submit records of fuel supplier certification with a certified statement that the records of fuel supplier certification submitted represent all of the fuel combusted during the reporting period.

[5] 10 CSR 10-6.260(4) is a state-only requirement

EU0310 Diesel Emergency Generator	
General Description:	8.09 MMBtu/hr Diesel Emergency Generator (Unit ID – BTCEMG)
Manufacturer/Model #:	N/A
EIQ Reference # (Year):	EP-27 (2002)

Permit Condition EU0310-001

10 CSR 10-6.060
Construction Permits Required
St Louis City Construction Permit No. 01-05-014

Emission Limitation:

1) The permittee shall not operate the emergency generator in excess of 500 hours in any consecutive twelve month period. (See Attachment G)
2) The emergency generators shall be operated with Fuel Oil No. 2 only.
3) The sulfur content of the fuel oil shall not exceed 0.5% by weight.

Monitoring/Record Keeping:

1) Sulfur dioxide emissions shall be monitored by maintaining the fuel supplier certification of the oil combusted.
2) Monthly records of hours of operation shall be kept, including a calculated total for every consecutive twelve-month period of time.

Reporting:

1) The permittee shall report to the City of St. Louis Air Pollution Control Program, 1415 North Thirteenth Street, St. Louis, MO 63106 and to APCP Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 no later than ten days after the end of each month, if the 12-month cumulative total records show that the permittee exceeded the hours of operation limitation for the generator.
2) Semiannually the permittee shall submit records of fuel supplier certification with a certified statement that the records of fuel supplier certification submitted represent all of the fuel combusted during the reporting period.

Permit Condition EU0310-002

10 CSR 10-6.260
Restriction of Emission of Sulfur Compounds

1) Emissions from this source operation shall not contain more than five hundred parts per million by volume (500 ppmv) of sulfur dioxide or more than thirty-five milligrams per cubic meter (35 mg/m3) of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour time period.
2) No person shall cause or permit the emission of sulfur compounds from any source which causes or contributes to concentrations exceeding those specified in 10 CSR 10-6.010 Ambient Air Quality Standards.
[10 CSR 10-6.260(4) &10 CSR 10-6.010 Ambient Air Quality Standards] [6]

Pollutant	Concentration by Volume	Remarks
a) Sulfur Dioxide (SO_2)	0.03 parts per million (ppm)	Annual arithmetic mean
	0.14 ppm (365 micrograms per cubic meter ($\mu g/m^3$))	24-hour average not to be exceeded more than once per year
	0.5 ppm (1300 $\mu g/m^3$)	3-hour average not to be exceeded more than once per year
b) Hydrogen Sulfide (H_2S)	0.05 ppm (70 $\mu g/m^3$)	½-hour average not to be exceeded over 2 times per year
	0.03 ppm (42 $\mu g/m^3$)	½-hour average not to be exceeded over 2 times in any 5 consecutive days
c) Sulfuric Acid (H_2SO_4)	10 $\mu g/m^3$	24-hour average not to be exceeded more than once in any 90 consecutive days
	30 $\mu g/m^3$	1-hour average not to be exceeded more than once in any 2 consecutive days

3) The emission units shall be operated with Fuel Oil No. 2 only.

Monitoring/Record Keeping:
The permittee shall maintain an accurate record of the sulfur content of fuel used. Fuel purchase receipts analyzed samples or certifications that verify the fuel type and sulfur content will be acceptable.

Reporting:
Semiannually the permittee shall submit records of fuel supplier certification with a certified statement that the records of fuel supplier certification submitted represent all of the fuel combusted during the reporting period.

[6] 10 CSR 10-6.260(4) is a state-only requirement

EU0320 Boiler #8	
General Description:	Natural Gas/Fuel Oil Fired 85 MMBtu/hr Boiler, Installed in 1995
Manufacturer/Model #:	Cleaver Brooks/DL-76E
EIQ Reference # (Year):	EP-25 (2002)

Permit Condition EU0320-001

10 CSR 10-6.070
New Source Performance Regulations
40 CFR Part 60 Subpart Dc
Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
10 CSR 10-6.060
Construction Permits Required
St. Louis City Construction Permit No. 01-05-013

Emission Limitation:

1) Standard for sulfur dioxide:
   a) On and after the date on which the initial performance test is completed or required to be completed under §60.8 of 40 CFR Part 60, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO2 in excess of 215 ng/J (0.50 lb/million Btu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. [§60.42c(d)]
   b) For distillate oil-fired boilers, compliance with the emission limits or fuel oil sulfur limits may be determined based on a certification from the fuel supplier, as described under §60.48c(f)(1). [§60.42c(h) & (h)(1)]
   c) The SO2 emission limits and fuel oil sulfur limits apply at all times, including periods of startup, shutdown, and malfunction. [§60.42c(i)]
2) Standard for particulate matter:
   a) On and after the date on which the initial performance test is completed or required to be completed under §60.8 of 40 CFR Part 60, whichever date comes first, no owner or operator of an affected facility that combusts oil and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity. [§60.43c(c)]
   b) The opacity standards apply at all times, except during periods of startup, shutdown, or malfunction. [§60.43c(d)]
3) The permittee shall only fire Boiler #8 with natural gas or distillate oil. [Construction Permit No. 01-05-013]

Monitoring:

1) Sulfur dioxide:
   The permittee shall monitor the sulfur dioxide emissions by maintaining the fuel supplier certification of the oil combusted.
2) Particulate matter (Opacity):
   The permittee shall follow the opacity monitoring and record keeping requirements as stated in the Permit Condition PW002.

Record Keeping:

1) For distillate oil: Records of fuel supplier certification.
   The Fuel Supplier Certification shall include the name of the oil supplier; and a statement from the oil supplier that the oil complies with the specifications for distillate oil (Distillate oil means fuel oil that complies with the specifications for fuel oil number 1 or 2, as defined by the American society for Testing and Materials in ASTM D396-78, 89, 90, 92, 96, or 98 "Standard Specification of Fuel Oils"). [§60.48c(f)(1) & §60.41c – Definition]
2) The permittee shall record and maintain records of the amounts of each fuel combusted during each day. [§60.48c(g)]

3) The permittee shall maintain all records required under §60.48c for a period of two (2) years following the date of such record. [§60.48c(i)]

Reporting:

The permittee shall submit records of fuel supplier certification with a certified statement signed by the owner or operator of the affected facility that the records of fuel supplier certification submitted represent all of the fuel combusted during the reporting period. The reporting period for the reports required is each six-month period. All reports including calendar dates covered in the reporting period shall be submitted to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 and to the City of St. Louis Air Pollution Control Division, 1415 North Thirteenth Street, St. Louis, MO 63106 by the 30th day following the end of the reporting period.
[§60.48c(d), (e)(1), (e)(11) & (j)]

IV. Core Permit Requirements

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements.

10 CSR 10-6.050, *Start-up, Shutdown and Malfunction Conditions*

(a.) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the director within two business days in writing the following information:
  (1.) Name and location of installation;
  (2.) Name and telephone number of person responsible for the installation;
  (3.) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
  (4.) Identity of the equipment causing the excess emissions;
  (5.) Time and duration of the period of excess emissions;
  (6.) Cause of the excess emissions;
  (7.) Air pollutants involved;
  (8.) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
  (9.) Measures taken to mitigate the extent and duration of the excess emissions; and
  (10.) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.

(b.) The permittee shall submit the paragraph (a.) information list to the director in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.

(c.) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph (a.) list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under section 643.080 or 643.151, RSMo.

(d.) Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under sections 643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.

(e.) Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

10 CSR 10-6.060, *Construction Permits Required*

The permittee shall not commence construction, modification, or major modification of any installation subject to this rule, begin operation after that construction, modification, or major modification, or begin operation of any installation which has been shut down longer than five years without first obtaining a permit from the permitting authority.

10 CSR 10-6.065, *Operating Permits*

The permittee shall file for renewal of this operating permit no sooner than eighteen months, nor later than six months, prior to the expiration date of this operating permit. The permittee shall retain the most current operating permit issued to this installation on-site and shall immediately make such permit available to any Missouri Department of Natural Resources personnel upon request.

10 CSR 10-6.110, *Submission of Emission Data, Emission Fees and Process Information*

(a.) The permittee shall complete and submit an Emission Inventory Questionnaire (EIQ) in accordance with the requirements outlined in this rule.

(b.) The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079 to satisfy the requirements of the Federal Clean Air Act, Title V.

(c.) The fees shall be due April 1 each year for emissions produced during the previous calendar year. The fees shall be payable to the Department of Natural Resources and shall be accompanied by the Emissions Inventory Questionnaire (EIQ) form or equivalent approved by the director.

10 CSR 10-6.130, *Controlling Emissions During Episodes of High Air Pollution Potential*

This rule specifies the conditions that establish an air pollution alert (yellow/orange/red/purple), or emergency (maroon) and the associated procedures and emission reduction objectives for dealing with each. The permittee shall submit an appropriate emergency plan if required by the Director.

10 CSR 10-6.150, Circumvention

The permittee shall not cause or permit the installation or use of any device or any other means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.

10 CSR 10-6.180, *Measurement of Emissions of Air Contaminants*

(a.) The director may require any person responsible for the source of emission of air contaminants to make or have made tests to determine the quantity or nature, or both, of emission of air contaminants from the source. The director may specify testing methods to be used in accordance with good professional practice. The director may observe the testing. All tests shall be performed by qualified personnel.

(b.) The director may conduct tests of emissions of air contaminants from any source. Upon request of the director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.

(c.) The director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

10 CSR 10-5.040, *Use of Fuel in Hand-Fired Equipment Prohibited*

It shall be unlawful to operate any hand-fired fuel-burning equipment in the St. Louis, Missouri metropolitan area. This regulation shall apply to all fuel-burning equipment including, but not limited to, furnaces, heating and cooking stoves and hot water furnaces. It shall not apply to wood-burning fireplaces and wood-burning stoves in dwellings, nor to fires used for recreational purpose, nor to fires used solely for the preparation of food by barbecuing. Hand-fired fuel-burning equipment is any stove, furnace, or other fuel-burning device in which fuel is manually introduced directly into the combustion chamber.

St. Louis City Ordinance 64749, Sec 17, *Open Burning Restrictions*

(a.) No person shall cause, suffer, allow or permit the open burning of refuse.

(b.) No person shall conduct, cause or permit the conduct of a salvage operation by open burning.

(c.) No person shall conduct, cause or permit the disposal of trade waste by open burning.
(d.) No person shall cause or permit the open burning of leaves, trees or the byproducts therefrom, grass, or other vegetation.
(e.) It shall be prima-facie evidence that the person who owns or controls property on which open burning occurs, has caused or permitted said open burning.

10 CSR 10-5.160, *Restriction of Emission of Odors*

No person shall emit odorous matter as to cause an objectionable odor on or adjacent to:
(a.) Residential, recreational, institutional, retail sales, hotel or educational premises.
(b.) Industrial premises when air containing odorous matter is diluted with 20 or more volumes of odor-free air; or
(c.) Premises other than those in paragraphs (1)A.1. and (2) of the rule when air containing odorous matter is diluted with four or more volumes of odor-free air.

The previously mentioned requirement shall apply only to objectionable odors. An odor will be deemed objectionable when 30% or more of a sample of the people exposed to it believe it to be objectionable in usual places of occupancy; the sample size to be at least 20 people or 75% of those exposed if fewer than 20 people are exposed.

This requirement is not federally enforceable.

10 CSR 10-5.240, *Additional Air Quality Control Measures May be Required When Sources Are Clustered in a Small Land Area*

The Air Conservation Commission may prescribe more restrictive air quality control requirements that are more restrictive and more extensive than provided in regulations of general application for:
(a.) Areas in which there are one or more existing sources and/or proposed new sources of particulate matter in any circular area with a diameter of two miles (including sources outside metropolitan area) from which the sum of particulate emissions allowed from theses sources by regulations of general application are or would be greater than 2000 tons per year or 500 pounds per hour.
(b.) Areas in which there are one or more existing sources and/or proposed new sources of sulfur dioxide in any circular area with a diameter of two miles from which the sum of sulfur dioxide emissions from these sources allowed by regulations of general application are or would be greater than 1000 tons for any consecutive three months or 1000 pounds per hour.

10 CSR 10-6.100, *Alternate Emission Limits*

Proposals for alternate emission limitations shall be submitted on Alternate Emission Limits Permit forms provided by the department. An installation owner or operator must obtain an Alternate Emission Limits Permit in accordance with 10 CSR 10-6.100 before alternate emission limits may become effective.

10 CSR 10-6.080, *Emission Standards for Hazardous Air Pollutants*
40 CFR Part 61 Subpart M, National Emission Standard for Asbestos

(a) The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos.
(b) The permittee shall conduct monitoring to demonstrate compliance with registration, certification, notification, and Abatement Procedures and Practices standards as specified in 40 CFR Part 61, Subpart M.

10 CSR 10-6.250, *Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements*

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the department to monitor training provided to employees. Each individual who works in asbestos abatement projects must first obtain certification for the appropriate occupation from the department. Each person who offers training for asbestos abatement occupations must first obtain accreditation from the department. Certain business entities that meet the requirements for state-approved exemption status must allow the department to monitor training classes provided to employees who perform asbestos abatement.

Title VI – 40 CFR Part 82, *Protection of Stratospheric Ozone*

(a.) The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
  (1.) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
  (2.) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
  (3.) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
  (4.) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

(b.) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:
  (1.) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
  (2.) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
  (3.) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
  (4.) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like" appliance as defined at §82.152).
  (5.) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
  (6.) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

(c.) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.

(d.) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in

Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.

The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR part 82*

10 CSR 10-6.280, *Compliance Monitoring Usage*

(a.) The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
(1.) Monitoring methods outlined in 40 CFR Part 64;
(2.) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
(3.) Any other monitoring methods approved by the director.

(b.) Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred by a permittee:
(1.) Monitoring methods outlined in 40 CFR Part 64;
(2.) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, "Operating Permits", and incorporated into an operating permit; and
(3.) Compliance test methods specified in the rule cited as the authority for the emission limitations.

(c.) The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
(1.) Applicable monitoring or testing methods, cited in:
- 10 CSR 10-6.030, "Sampling Methods for Air Pollution Sources";
- 10 CSR 10-6.040, "Reference Methods";
- 10 CSR 10-6.070, "New Source Performance Standards";
- 10 CSR 10-6.080, "Emission Standards for Hazardous Air Pollutants"; or

(2.) Other testing, monitoring, or information gathering methods, if approved by the director, that produce information comparable to that produced by any method listed above.

V. General Permit Requirements

Permit Duration
10 CSR 10-6.065(6)(C)1.B.

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed.

General Record Keeping and Reporting Requirements
10 CSR 10-6.065(6)(C)1.C

I) Record Keeping
   A) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
   B) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any City of St. Louis Air Pollution Control Program or Missouri Department of Natural Resources' personnel upon request.

II) Reporting
   A) The permittee shall submit a report of all required monitoring by:
      1) October 1st for monitoring which covers the January through June time period, and
      2) April 1st for monitoring which covers the July through December time period.
      3) Exception: Monitoring requirements which require reporting more frequently than semi annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
   B) Each report must identify any deviations from emission limitations, monitoring, record keeping, reporting, or any other requirements of the permit, this includes deviations or Part 64 exceedances.
   C) All reports shall be submitted to The City of St. Louis Air Pollution Control Program, 1415 North 13th Street, St. Louis, MO 63106 and the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102.
   D) Submit supplemental reports as required or as needed. Supplemental reports are required no later than ten days after any exceedance of any applicable rule, regulation or other restriction. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
      1) Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph (6)(C)7 of 10 CSR 10-6.065 (Emergency Provisions) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if you wish to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and that you can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.
      2) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.
      3) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's semiannual report shall be reported on the schedule specified in the permit.

4) These supplemental reports shall be submitted to the City of St. Louis Air Pollution Control Program, 1415 North 13th Street, St. Louis MO 63106 and the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedance of any applicable rule, regulation, or other restriction.

E) Every report submitted shall be certified by the responsible official, except that, if a report of a deviation must be submitted within ten days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within ten days after that, together with any corrected or supplemental information required concerning the deviation.

F) The permittee may request confidential treatment of information submitted in any report of deviation.

Risk Management Plans Under Section 112(r)
10 CSR 10-6.065(6)(C)1.D.

The permittee shall comply with the requirements of 40 CFR Part 68, Accidental Release Prevention Requirements. If the permittee has more than a threshold quantity of a regulated substance in process, as determined by 40 CFR Section 68.115, the permittee shall submit a Risk Management Plan in accordance with 40 CFR Part 68 no later than the latest of the following dates:

1) June 21, 1999;
2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130; or
3) The date on which a regulated substance is first present above a threshold quantity in a process.

Severability Clause
10 CSR 10-6.065(6)(C)1.F.

In the event of a successful challenge to any part of this permit, all uncontested permit conditions shall continue to be in force. All terms and conditions of this permit remain in effect pending any administrative or judicial challenge to any portion of the permit. If any provision of this permit is invalidated, the permittee shall comply with all other provisions of the permit.

General Requirements
10 CSR 10-6.065(6)(C)1.G

1) The permittee must comply with all of the terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application.
2) The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.
3) The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and re-issuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, will not stay any permit condition.
4) This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
5) The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the Air Pollution Control Program copies of records required to be kept by the permittee. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 10 CSR 10-6.065(6)(C)1.

Incentive Programs Not Requiring Permit Revisions
10 CSR 10-6.065(6)(C)1.H.

No permit revision will be required for any installation changes made under any approved economic incentive, marketable permit, emissions trading, or other similar programs or processes provided for in this permit.

Compliance Requirements
10 CSR 10-6.065(6)(C)3.

I) Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
II) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
   A) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
   B) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
   C) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
   D) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
III) All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
   A) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
   B) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
IV) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to EPA Region VII, 901 North 5th Street, Kansas City, Kansas 66101, as well as the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 and the City of St. Louis Air Pollution Control Program, 1415 North 13th Street, St. Louis, MO 63106. All deviations and Part 64 exceedances and excursions must be included in the compliance certifications. The compliance certification shall include the following:
   A) The identification of each term or condition of the permit that is the basis of the certification,
   B) The current compliance status, as shown by monitoring data and other information reasonably available to the installation,
   C) Whether compliance was continuous or intermittent,
   D) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period, and
   E) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

Permit Shield
10 CSR 10-6.065(6)(C)6.

I) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date that this permit is issued, provided that:
   A) The applicable requirements are included and specifically identified in this permit; or
   B) The permitting authority, in acting on the permit revision or permit application, determines in writing that other requirements, as specifically identified in the permit, are not applicable to the installation, and this permit expressly includes that determination or a concise summary of it.
II) Be aware that there are exceptions to this permit protection. The permit shield does not affect the following:
   A) The provisions of section 303 of the Act or section 643.090, RSMo concerning emergency orders,
   B) Liability for any violation of an applicable requirement which occurred prior to, or was existing at, the time of permit issuance,
   C) The applicable requirements of the acid rain program,
   D) The administrator's authority to obtain information, or
   E) Any other permit or extra-permit provisions, terms or conditions expressly excluded from the permit shield provisions.

Emergency Provisions
10 CSR 10-6.065(6)(C)7.

I) An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7. shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:
   A) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
   B) That the installation was being operated properly,
   C) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
   D) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
II) Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

Operational Flexibility
10 CSR 10-6.065(6)(C)8.

An installation that has been issued a Part 70 operating permit is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described below if the changes are not Title I modifications, the changes do not cause emissions to exceed emissions allowable under the permit, and the changes do not result in the emission of any air contaminant not previously emitted. The permittee shall notify the Air Pollution Control Program and the Administrator at least seven days in advance of these changes, except as allowed for emergency or upset conditions. Emissions allowable under the permit means a federally enforceable permit term or condition determined at issuance to be required by an applicable requirement that established an emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.

I) Section 502(b)(10) changes. Changes that, under section 502(b)(10) of the Act, contravene an express permit term may be made without a permit revision, except for changes that would violate applicable

requirements of the Act or contravene federally enforceable monitoring (including test methods), record keeping, reporting or compliance requirements of the permit.

A) Before making a change under this provision, The permittee shall provide advance written notice to the Air Pollution Control Program and to the Administrator, describing the changes to be made, the date on which the change will occur, and any changes in emission and any permit terms and conditions that are affected. The permittee shall maintain a copy of the notice with the permit, and this agency shall place a copy with the permit in the public file. Written notice shall be provided to the administrator and this agency at least seven days before the change is to be made. If less than seven days notice is provided because of a need to respond more quickly to these unanticipated conditions, The permittee shall provide notice to the administrator and the permitting authority as soon as possible after learning of the need to make the change.
B) The permit shield shall not apply to these changes.

Off-Permit Changes
10 CSR 10-6.065(6)(C)9.

I) Except as noted below, The permittee may make any change in its permitted operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Insignificant activities listed in the application, but not otherwise addressed in or prohibited by this permit, shall not be considered to be constrained by this permit for purposes of the off-permit provisions of this section. Off-permit changes shall be subject to the following requirements and restrictions:
A) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; The permittee may not change a permitted installation without a permit revision, if this change is subject to any requirements under Title IV of the Act or is a Title I modification;
B) The permittee must provide written notice of the change to the permitting authority and to the administrator no later than the next annual emissions report. This notice shall not be required for changes that are insignificant activities under paragraph (6)(B)3. of this rule. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change.
C) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes; and
D) The permit shield shall not apply to these changes.

Responsible Official
10 CSR 10-6.020(2)(R)12.

The application utilized in the preparation of this was signed by Dr. Paul P. Hipps, Director, Environmental Safety Office. If this person terminates employment, or is reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

Reopening Permit For Cause
10 CSR 10-6.065(6)(E)6.
In accordance with 10 CSR 10-6.065(6)(E)6.A., this permit may be reopened with cause if:
1) The Missouri Department of Natural Resources (MDNR) receives notice from the Environmental Protection Agency (EPA) that a petition for disapproval of a permit pursuant to 40 CFR § 70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,
2) MDNR or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
3) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
4) The installation is an affected source under the acid rain program and additional requirements (including excess emissions requirements), become applicable to that source, provided that, upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit; or
5) MDNR or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

Statement of Basis
10 CSR 10-6.065(6)(E)1.C.

This permit is accompanied by a statement setting forth the legal and factual basis for the draft permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

Attachment A

10 CSR 10-6.170 Compliance Demonstration
Fugitive Emission Observations

		Visible Emissions					Abnormal Emissions		
		Beyond Boundary		Less than		Greater Than			
Date	Time	No	Yes	Normal	Normal	Normal	Cause	Corrective Action	Initial

Attachment B-1

10 CSR 10-6.220 Compliance Demonstration
Opacity Emission Observations

Date	Emission Source	Observer (initials)	Visible Emissions (yes/no)	If Visible Emissions, was a Method 9 done? (yes/no)

Date	Emission Source	Observer (initials)	Visible Emissions (yes/no)	If Visible Emissions, was a Method 9 done? (yes/no)

Attachment B-2

10 CSR 10-6.220 Compliance Demonstration
Opacity Emission Observations (Method 9)

Company_____ Observer_____
Location_____ Observer Certification Date_____
Date_____ Type Facility_____
Time_____ Pt. Of Emission_____
Control Device_____

	Seconds					Steam Plume		
Hour	Min	0	15	30	45	Attached	Detached	Comments
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							

SUMMARY OF AVERAGE OPACITY

	Time	Opacity	
Set Number	Start - End	Sum	Average

Readings ranged from ____ to ___ % opacity.

The Source was/was not in compliance with ___ at the time evaluation was made.

_____

(Signature of Observer)

Attachment C

Fuel Oil Usage Compliance Demonstration

Recording Period		Fuel Type	Amount Burned	Sulfur Content	Verification of Sulfur Content
Begin	End				

Attachment D-1

10 CSR 10-5.300
Solvent Containing Waste Transfer Log

Date	Amount of Total Solvent Transferred (gallons)	Amount of Solvent Transferred to a Contract Reclamation Service (gallons)	Amount of Solvent Transferred to a Disposal Facility (gallons)	Amount of Solvent Distilled on the Premises (gallons)

Attachment D-2

10 CSR 10-5.300
Purchase Records for Cold Cleaning Solvent

Date	Solvent Supplier Name	Solvent Supplier Address	Type of Solvent	Solvent Volatility in mmHg at 20°C (68°F)

Attachment D-3

10 CSR 10-5.300
Employee Solvent Metal Cleaning Training Log

Date	Title of Solvent Metal Cleaning Training Course	Instructor

Attachment E

Inspection/Maintenance/Repair/Malfunction Log

Date	Equipment/Emission Unit	Activities Performed

Attachment F

Incinerator Compliance Demonstration

Date	Type of Charge (bodies, body parts, containers, etc.)	Amount (lbs)	Is the material from the Medical Center Complex? (yes/no)	Hours of Incinerator Operations

Attachment G

Emergency Generator Operating Hours Compliance Demonstration

Date/Month	Monthly Hours of Generator Operations	12-Month Total Operating Hours

Attachment H

This attachment may be used to demonstrate compliance with 10 CSR 10-5.030 *Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating*.
The emission limit for EU0010 (new, i.e. installed after 02/15/79):

$0.8Q^{-0.301} = 0.8(508.65)^{-0.301} = 0.12$ lb/MMBtu

where Q is the total heat input of all indirect heating sources at the installation.
The emission limit for EU0020 and EU0030 (existing, i.e. installed by 02/15/79):

$1.09Q^{-0.259} = 1.09(508.65)^{-0.259} = 0.22$ lb/MMBtu

Distillate Fuel Burning Emission Units

Emission Unit #	Heat Capacity (MMBtu/hr)	Maximum Hourly Design Rate (10^3 gal)	PM Emission Factor (lb/10^3 gal)	Emission Factor Reference	Potential Emission Rate (lb/MMBtu)	Emission Rate Limit (lb/MMBtu)	Unit in Compliance? (Yes/No)
EU0010	93	0.664	2.00	AP-42 - Ch. 1	0.014	0.12	Yes
EU0020	93	0.664	2.00	AP-42 - Ch. 1	0.014	0.22	Yes
EU0030	124	0.886	2.00	AP-42 - Ch. 1	0.014	0.22	Yes

Note: 10 CSR 10-5.30 dos not apply to boilers identified as EU0050 and EU0330 in this permit per paragraph (1)(F) of this rule.

STATEMENT OF BASIS

Permit Reference Documents
These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

1) Part 70 Operating Permit Application, received May 13, 1997; revised October 2, 2001;
2) 2002 Emissions Inventory Questionnaire, received March 31, 2003;
3) 2001 Emissions Inventory Questionnaire, received April 8, 2002;
4) 1999 Emissions Inventory Questionnaire, received March 31, 2000;
5) 1998 Emissions Inventory Questionnaire, received March 31, 1999;
6) U.S. EPA document, FIRE, *Source Classification Codes and Emission Factor Listing for Criteriaa Air Pollutants,* Version 6; and
7) U.S. EPA document, AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.

Applicable Requirements Included in the Operating Permit but Not in the Application
In the operating permit application, the installation indicated they were not subject to the following regulation(s). However, in the review of the application, the agency has determined that the installation is subject to the following regulation(s) for the reasons stated.

10 CSR 10-5.510, *Control of Emissions of Nitrogen Oxides*
Section (3)(B) of 10 CSR 10-5.510 applies to Boiler #8 (EU0320) based on 10 CSR 10-6.020 (2)(A)4, which states "The actual rate of emissions of a pollutant from a source operation is determined as follows: 1) actual emission as of a particular date shall equal the average rate, in tons per year, at which the source operation or installation actually emitted the pollutant during the previous two year period and which represents normal operation." Two years of actual emissions data are not available for Boiler #8. All other NOx emitting units each emit less than 30 tons of NOx annually and are exempt from the requirements of this rule under Section (3)9 of the rule, which states the following:

Any unit that would otherwise be required to comply with this rule with actual annual NOx emissions of thirty tons per year or less. This exemption shall cease to apply to a unit if the unit ever exceeds thirty tons per year of actual NOx emissions for any calendar.

10 CSR 10-6.100, *Alternate Emission Limits*
This rule has been included in the operating permit in order to provide citing for the allowance of requests for alternate emission limits. This citing provides the information necessary to know that an alternate emission limit must be placed in a permit before the alternate emission limit may become effective.

10 CSR 10-6.180, *Measurement of Emissions of Air Contaminants*
This rule has been included in the operating permit in order to provide citing for the allowance of requests for emissions data results. On past forms issued by the Air Pollution Control Program, including the application for this permit, it was automatically marked as an administrative rule not required to be listed as an applicable requirement. It is no longer judged to be solely administrative and is, therefore, included in the operating permit.

10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*
This rule had not been created at the time of application; however, it has been determined to be applicable to the installation and, therefore, has been included in the operating permit.

10 CSR 10-6.260, *Restriction of Emission of Sulfur compounds*
This rule had not been created at the time of application; however, it has been determined to be applicable to the installation and, therefore, has been included in the operating permit.

10 CSR 10-6.280, *Compliance Monitoring Usage*
On December 5, 2001, The Air Pollution Control Program received a letter from EPA Region VII stating EPA has determined that the language in the State Implementation Plan regarding credible evidence is an applicable requirement and must be included in each Title V operating permit. On July 2, 2002, The air Pollution Control Program responded to EPA Region VII and agreed to include 10 CSR 10-6.280, *Compliance Monitoring Usage,* in the Core Permit Requirements Section of the Title V operating permit to address the issue.

10 CSR 10-6.400, *Restriction of Emission of Particulate Matter from Industrial Processes*
This rule had not been created at the time of application; however, it has been determined to be applicable to the installation and, therefore, has been included in the operating permit.

Other Air Regulations Determined Not to Apply to the Operating Permit
The Air Pollution Control Program (APCP) has determined the following requirements to not be applicable to this installation at this time for the reasons stated.

St. Louis City Ordinances Nos. 50163, 55293, 59270, 60023, and 60629
These ordinances were reviewed and considered at the time the application for this permit was submitted. Since that time, these ordinances have been repealed and replaced with St. Louis City Ordinance No. 64749. The only section of Ordinance 64749 that corresponds to a rescinded ordinance included in the State SIP and, therefore, federally enforceable is Section 17 – Open Burning Restrictions. This section is the only section listed in this operating permit.

10 CSR 10-5.050, *Restriction of Emission of Particulate Matter From Industrial Processes*
This rule has been rescinded from the state rules and the Federal SIP on March 30, 2001. It has been replaced by 10 CSR 10-6.400 and, therefore, is not cited in the operating permit.

10 CSR 10-5.090, *Restriction of Emission of Visible Air Contaminants*
This rule has been rescinded from the state rules and the Federal SIP on May 30, 2000. It has been replaced by 10 CSR 10-6.220 and, therefore, is not cited in the operating permit.

10 CSR 10-5.110, *Restrictions of Emission of Sulfur Dioxide for Use of Fuel*
This rule has been rescinded from the state rules and the Federal SIP on July 30, 1997, therefore, it is not cited in the operating permit.

10 CSR 10-5.130, *Certain Coals to be Washed*
In the operating permit application, the installation indicated that they were subject to this regulation. However, the installation no longer uses coal for heating. This rule was not cited in the operating permit.

10 CSR 10-5.180, *Emission of Visible Air Contaminants From Internal Combustion Engine*
This rule was rescinded from the state rules and the Federal SIP on November 30, 2002. Therefore, the above rule was not cited in the operating permit.

10 CSR 10-6.200, *Hospital, Medical, Infectious Waste Incinerators*

The pathological incinerator, referenced in the St. Louis City Construction Permit #96-10-083F, is used to burn human bodies. The definitions, as stated in the rule, for hospital, medical/infectious waste exclude human pathological waste. Therefore, this rule was not included in the operating permit.

Construction Permit Revisions

The following revisions were made to construction permits for this installation:

1) City of St. Louis Construction Permit #96-10-083F
Section IV of the construction permit #96-10-083F originally required records to be retained for a minimum of two years. Record keeping specified in paragraph (6)(C)1.C.(II)(b)I of 10 CSR 10-6.065, *Operating Permits*, requires Title V sources to retain all records of all required monitoring data and support information for five years. To be in compliance with the construction permit and the Title V record retention period, the installation will keep the records for five years.

2) City of St. Louis Construction Permit #95-05-056PM
Section II(C) states:
"The boiler shall not discharge into the atmosphere any gases that exhibit greater than 20 percent opacity for a period or periods aggregating more than six minutes in any 60 minute period. No emissions shall exceed 40 percent opacity regardless of duration."
This rule was applied in the Construction Permit in accordance with City Ordinance 65645, but the opacity limitation included in 40 CFR Part 60 Subpart Dc is more stringent. Therefore, the limitation was not included in the Title V permit.

3) City of St. Louis Construction Permit #01-05-013
Section II(A) states:
"Visible opacity shall not exceed twenty (20%) percent for a period or periods in excess of six (6) minutes in any consecutive sixty (60) minute period."
This rule was applied in the Construction Permit in accordance with City Ordinance 65108, but the opacity limitation included in 40 CFR Part 60 Subpart Dc is more stringent. Therefore, the limitation was not included in the Title V permit.

NSPS Applicability

10 CSR 10-6.070, *New Source Performance Regulations*

40 CFR Part 60, Subpart D, *Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971*.

The provisions of this subpart apply to each fossil-fuel-fired steam generating unit of more than 73 megawatts heat input rate (250 million Btu per hour) constructed or modified after August 17, 1971 and not covered under Subpart Da.
None of the boilers are rated at greater than 73 megawatts heat input rate (250 million Btu per hour), therefore this subpart does not apply to this installation.

40 CFR Part 60, Subpart Da, *Standards of Performance for Electric Utility Steam Generating Units for Which Construction is commenced After September 18, 1978.*

The provisions of this subpart apply to each electric utility fossil-fuel-(either alone or in combination with any other fuel) fired steam generating unit of more than 73 megawatts heat input rate (250 million Btu per hour) constructed or modified after September 18, 1978.
None of the boilers are electric utility steam generating units as defined in this subpart nor are rated at

greater than 73 megawatts heat input rate (250 million Btu per hour), therefore this subpart does not apply to this installation.

40 CFR Part 60, Subpart Db, *Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.*

The provisions of this subpart apply to each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 29 MW (100 million Btu/hour).

Boiler #5 (EU0030) rated at greater than 100 MMBtu/hr commenced construction prior to June 19, 1984, therefore is not subject to this subpart.

40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*

Subpart Dc applies to each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million Btu/hr) or less, but greater than or equal to 2.9 MW (10 million Btu/hr).

Boiler #7 (EU0050) and Boiler #8 (EU0320), with a maximum design heat input capacity less than 100 MMBtu/hr, but greater than 10 MMBtu/hr, are the only boilers constructed after the applicability date of this subpart that are subject to this subpart.

40 CFR Part 60, Subparts K, *Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction Or Modification Commenced After June 11, 1973, and Prior to May 19, 1978.*
40 CFR Part 60, Subpart Ka, *Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction Or Modification Commenced After May 19, 1978, and Prior to July 23, 1984*

The installation does not have any petroleum storage vessels as defined in these subparts that are subject to this regulation.

40 CFR Part 60, Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction Or Modification Commenced After July 23, 1984.*

The diesel fuel storage tanks are not large enough for these regulations to apply.

MACT Applicability

40 CFR Part 63, Subpart Q, *National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers*

The provisions of this subpart apply to all new and existing industrial process cooling towers that are operated with chromium-based water treatment chemicals on or after September 8, 1994, and are either major sources or are integral parts of facilities that are major sources as defined in 40 CFR 63.401.

The cooling towers located at this facility do not use chromium-based water treatment chemicals, therefore, this rule was not included in the operating permit.

40 CFR Part 63, Subpart T, *National Emission Standards for Halogenated Solvent Cleaning*

The provisions of this subpart apply to each individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any solvent containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride or chloroform, or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent. Wipe cleaning activities, such as using a rag containing halogenated solvent are not covered under the provisions of this subpart.

The cold cleaners at this installation do not use the following solvents: methylene chloride, perchlorethylene, triclorethylene, 1,1,1-trichlorethylene, carbon tetrachloride, or any chloroform. Therefore, this rule was not included in the operating permit.

40 CFR Part 63, Subpart B, *Requirements for Control Technology Determinations for Major Sources in Accordance with Clean Air Act Sections, Sections 112(g) and 112(j)*

The installation has ceased using coal as a fuel source for its various indirect heating sources and incinerator. As a result, the installation no longer maintains the potential to exceed major levels of hazardous air pollutants (HAPs) and is not subject to the requirements of 40 CFR Part 63, Subpart B.

NESHAP Applicability

10 CSR 10-6.080, *Emission Standards for Hazardous Air Pollutants, Subpart M, National Standards for Asbestos*

The requirements of this rule have been summarized and listed in the operating permit.

Other Regulatory Determinations

1) 10 CSR 10-5.030, *Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating*

For 10 CSR 10-5.030, emission limitations were calculated as follows.

The PM emission limitation for existing sources (before February 15, 1979) was calculated using the equation, $E = 1.09(Q)^{-0.259}$, and $E = 0.8Q^{-0.301}$ for new sources (installed after February 15, 1979 where **Q = 508.65 MMBtu/hr**, the total heat input of all indirect heating sources at the installation, and E = the maximum allowable particulate emission rate in pounds per MMBtu of heat input, rounded off to two (2) decimal places. The installation operates the following fuel burning equipment used for indirect heating:

Distillate Oil Burning Indirect Heating Sources

Emission Unit	Heat Input (MMBtu/hr)	Maximum Hourly Design Rate (10^3 gal/hr)	PM Emission Factor * (lb/10^3 gal)	PM Potential Emission Rate (lb/MMBtu)	PM Allowable Emission Rate (lb/MMBtu/hr)
Boiler #1	93	0.664	2.00	0.014	0.12
Boiler #4	93	0.664	2.00	0.014	0.22
Boiler #5	124	0.886	2.00	0.014	0.22
Boiler #7	88	0.629	2.00	0.014	NSPS Units – Not Subject to this Rule
Boiler #8	85	0.583	2.00	0.014	

*AP-42, Section 1.3 Fuel Oil Combustion

Natural Gas Burning Indirect Heating Sources

Emission Unit	Heat Input (MMBtu/hr)	Maximum Hourly Design Rate (MMCF/hr)	PM Emission Factor ** (lb/MMCF)	PM Potential Emission Rate (lb/MMBtu)	PM Allowable Emission Rate (lb/MMBtu/hr)
Water Heater	0.075	0.75E-4	7.6	0.01	0.12
Forced Air Furnace	1.25	0.001	7.6	0.01	0.12
Forced Air Furnace	1.25	0.001	7.6	0.01	0.12
Boiler	0.75	0.001	7.6	0.01	0.12
Boiler	1.00	0.001	7.6	0.01	0.12
Boiler	1.00	0.001	7.6	0.01	0.12
Water Heater	0.075	0.75E-4	7.6	0.01	0.12

Natural Gas Burning Indirect Heating Sources

Emission Unit	Heat Input (MMBtu/hr)	Maximum Hourly Design Rate (MMCF/hr)	PM Emission Factor ** (lb/MMCF)	PM Potential Emission Rate (lb/MMBtu)	PM Allowable Emission Rate (lb/MMBtu/hr)
Space Heater	0.2	0.2E-3	7.6	0.01	0.12
Space Heater	0.2	0.2E-3	7.6	0.01	0.12
Space Heater	0.2	0.2E-3	7.6	0.01	0.12
Space Heater	0.2	0.2E-3	7.6	0.01	0.12
Space Heater	0.2	0.2E-3	7.6	0.01	0.12
Space Heater	0.2	0.2E-3	7.6	0.01	0.12
Space Heater	0.2	0.2E-3	7.6	0.01	0.12
Space Heater	0.2	0.2E-3	7.6	0.01	0.12
Water Heater	0.24	0.2E-3	7.6	0.01	0.12
Boiler	1.26	0.001	7.6	0.01	0.12
Water Heater	0.075	0.75E-4	7.6	0.01	0.12
Boiler	2.205	0.002	7.6	0.01	0.12
Boiler	2.205	0.002	7.6	0.01	0.12
Water Heater	0.5	0.001	7.6	0.01	0.12
Water Heater	0.5	0.001	7.6	0.01	0.12
Forced Air Furnace	0.125	0.1E-3	7.6	0.01	0.12
Forced Air Furnace	0.125	0.1E-3	7.6	0.01	0.12
Water Heater	0.032	0.32E-4	7.6	0.01	0.12
Draft Induced Furnace	0.11	0.1E-3	7.6	0.01	0.12
Unit Heater	0.125	0.1E-3	7.6	0.01	0.12
Unit Heater	0.125	0.1E-3	7.6	0.01	0.12
Rooftop Furnace Unit	0.12	0.1E-3	7.6	0.01	0.12
Rooftop Furnace Unit	0.242	0.2E-3	7.6	0.01	0.12
Rooftop Furnace Unit	0.12	0.1E-3	7.6	0.01	0.12
Boiler	2.208	0.002	7.6	0.01	0.22
Boiler	2.208	0.002	7.6	0.01	0.22
Water Heater	0.075	0.75E-4	7.6	0.01	0.22
Boiler	1.2	0.1E-3	7.6	0.01	0.22
Boiler	2.75	0.003	7.6	0.01	0.22

**AP-42, Section 1.4 Natural Gas Combustion

2) 10 CSR 10-6.065(3)(D), *Operating Permits*
The installation operates natural gas fired combustion units (emission units without limitation) of varying size listed in the table below. All of these combustion units emit only combustion products, produce less than one hundred fifty (150) pounds per day of any air contaminant and have a maximum rated capacity of less than ten (10) million British thermal units (Btu) per hour heat input by using exclusively natural gas and/or propane. The APCP has determined that units such as these are not necessary to include in the operating permit as emission units with limitations.

Equipment	Heat Input (MMBtu/hr)	Equipment	Heat Input (MMBtu/hr)
Boiler	1.6	Water Heater	0.075
Water Heater	0.075	Boiler	2.205
Forced Air Furnace	1.25	Boiler	2.205
Forced Air Furnace	1.25	Water Heater	0.5
Boiler	0.75	Water Heater	0.5
Boiler	0.75	Forced Air Furnace	0.125
Boiler	1	Forced Air Furnace	0.125
Boiler	1	Water Heater	0.032
Water Heater	0.075	Draft Induced Furnace	0.11
Space Heater	0.2	Unit Heater	0.125
Space Heater	0.2	Unit Heater	0.125
Space Heater	0.2	Rooftop Furnace Unit	0.12
Space Heater	0.2	Rooftop Furnace Unit	0.242
Space Heater	0.2	Rooftop Furnace Unit	0.12
Space Heater	0.2	Boiler	2.208
Space Heater	0.2	Boiler	2.208
Space Heater	0.2	Water Heater	0.075
Space Heater	0.5	Boiler	1.2
Water Heater	0.24	Boiler	2.75
Boiler	1.26		

3) 10 CSR 10-5.080, *Incinerators*
This regulation was rescinded on December 9, 1991 but it remains in the State Implementation Plan. The pathological incinerator was deemed not applicable to this rule because the definition of refuse, as stated in 10 CSR 10-6.020(R)4, does not include pathological waste.

4) 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*
At the time of issuance of this permit, the installation had already completed its weekly and bi-weekly observations, as required by the permit conditions PW002. The installation currently conducting monthly observations as required by the previously mentioned permit condition.

Visible emissions observations will be performed in frequencies as stated in the permit and logged according to the monitoring and record keeping requirements. As stated in the Region 7 Policy on Periodic Monitoring for Opacity, a Method 22 like observation will consist of a quick survey of the entire plant. In most cases, this "qualitative" assessment should take more than 10-15 minutes, even for complex sources. Detecting visible emissions is an indicator of operating problems and gives the permittee a chance to take corrective actions before exceeding the opacity limit. Conducting Method 9 observations after the observation of visible emissions determines whether the emissions exceed the opacity limit, or confirm that corrective action has restored proper operation. Therefore, the tiered monitoring frequency of visible/no visible emissions observations using Method 22 like procedures is considered sufficient.

5) 10 CSR 10-6.260, *Restriction of Emission of Sulfur Compounds*
This rule applies to the Boilers #1, #4, #5 (EU0010 through EU0030). These boilers use both Fuel Oil #2 and natural gas as fuel. Compliance with this rule is to be shown either from stack testing or by proving the sulfur content is less than 0.5%. This rule also applies to the emergency generators and the miscellaneous indirect heating sources (listed as emission units without limitations). Emergency generators EU0080 through EU0110 burn natural gas only, emergency generators EU0120 and EU0130 burn only gasoline, and emergency generators EU0140 through EU0310 burn only fuel oil #2. The miscellaneous indirect heating sources listed as emission units without limitations only burn natural gas for fuel. Compliance with the emission limitations is shown by the following calculations:

For Fuel Oil #2 (0.5% sulfur):

SO_2

SO_2 emission factor = 142 (lb SO_2 x %S)/1000 gal fuel (AP-42, Section 1.3)
F factor for fuel oil = 10,320 wscf/MMBtu (40 CFR Part 60, Method 19) (F factor is ratio of gas volume of products of combustion to heat content of fuel)

$$(142)(0.5)\frac{lb\ SO_2}{1000\ gal} \div 137\frac{MMBtu}{1000\ gal} \div 10320\frac{ft^3}{MMBtu} = 5.02 \times 10^{-5}\frac{lb\ SO_2}{ft^3}$$

Using 0.5% sulfur

To convert lb SO_2/ft^3 to ppm SO_2 divide by 1.66×10^{-7} (40 CFR Part 60, Method 19)

$(5.02 \times 10^{-5}) \div (1.66 \times 10^{-7}) = 302$ ppm

To convert from ppm to ppmv, multiply by 0.4496 (AP-42 Appendix A)

303 ppm x 0.4496 = **136 ppmv** (emission limit is 500 ppmv)

SO_3

SO_3 emission factor = 2 (lb SO_3 x %S)/1000 gal fuel (AP-42, Section 1.3)
F factor for fuel oil = 10,320 wscf/MMBtu (40 CFR Part 60, Method 19)

Using 0.5% sulfur

$$(2)(0.5)\frac{\text{lb } SO_3}{1000\text{ gal}} \div 137\frac{\text{MMBtu}}{1000\text{ gal}} \div 10320\frac{\text{ft}^3}{\text{MMBtu}} \times 35.3\frac{\text{ft}^3}{\text{m}^3} \times 454000\frac{\text{mg}}{\text{lb}} = \mathbf{11.3}\frac{\mathbf{mg\ SO_3}}{\mathbf{m^3}}$$

(The emission limit is 35 mg/m^3)

6) St Louis City Construction Permit No. 96-10-083F
Section 2,A of construction permit #96-10-083F States: "The particulate emission shall not exceed 0.03 grains per dry standard cubic foot of exhaust gas corrected to seven percent (7%) oxygen." The installation provided stack test performed on April 22, 1998 showing an average emission rate of 0.029 grains per dry standard cubic foot corrected to 7% oxygen

7) 10 CSR 10-6.400, *Restriction of particulate matter from industrial processes*
The installation operates 24 cooling towers that are used for comfort air conditioning. The potential to emit

from each cooling tower is less than 0.5 pounds per hour of particulate matter. Per 10 CSR 10-6.400(1)(B)11. emission units with potential to emit less than 0.5 pounds per hour of particulate matter are exempt from the requirements of this rule. Therefore, these cooling towers are not subject to the requirements of this rule.

Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis
Any regulation which is not specifically listed in either the Operating Permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons:

1. The specific pollutant regulated by that rule is not emitted by the installation;
2. The installation is not in the source category regulated by that rule;
3. The installation is not in the county or specific area that is regulated under the authority of that rule;
4. The installation does not contain the type of emission unit which is regulated by that rule;
5. The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the APCP's satisfaction, the installation's compliance with that regulation(s). If the installation is not in compliance with a regulation which was not previously cited, the installation shall submit to the APCP a schedule for achieving compliance for that regulation(s).

Prepared by:

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